

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-28 (Canceled)

29. (New) A process to inhibit the formation of scale in a water system at both high (e.g. wellhead) and low (e.g. seabed) temperatures comprising the step of adding to the water system of a scale inhibiting amount of a composition comprising:

(a) a copolymer of an unsaturated phosphonic acid (or salt of such an acid) with an unsaturated sulphonic acid (or salt of such an acid) or an unsaturated carboxylic acid (or salt of such an acid);

or

(b) a terpolymer of an unsaturated phosphonic acid (or salt of such an acid) with an unsaturated sulphonic acid (or salt of such an acid) and an unsaturated carboxylic acid (or salt of such an acid).

30. (New) A process to control the deposition of scale in a water system operating under highly alkaline conditions, comprising the step of adding to the water system of a scale inhibiting amount of a composition comprising:

(a) a copolymer of an unsaturated phosphonic acid (or salt of such an acid) with an unsaturated sulphonic acid (or salt of such an acid) or an unsaturated carboxylic acid (or salt of such an acid)

or

(b) a terpolymer of an unsaturated phosphonic acid (or salt of such an acid) with an unsaturated sulphonic acid (or salt of such an acid) and an unsaturated carboxylic acid (or salt of such an acid).

31. (New) The process according to Claim 29, wherein the composition comprises a copolymer of vinylphosphonic acid (VPA) (or a salt thereof) and vinylsulphonic acid (VSA) (or a salt thereof).

32. (New) The process according to Claim 29, wherein the composition comprises a 1 : 20 copolymer of VPA and VSA.

33. (New) The process according to Claim 29, wherein the composition comprises a copolymer of VPA (or a salt thereof) and acrylic acid (AA) (or a salt thereof) or methacrylic acid (MAA) (or a salt thereof).

34 (New) The process according to Claim 29, wherein the composition comprises a copolymer of vinylidene-1,1-diphosphonic acid (VDPA) (or a salt thereof) and AA (or a salt thereof) or MAA (or a salt thereof).

35. (New) The process according to Claim 29, wherein the composition comprises a copolymer of VDPA (or a salt thereof) and VSA (or a salt thereof)

36. (New) The process according to Claim 29, wherein the composition comprises a terpolymer of VPA (or a salt thereof), AA (or a salt thereof) and VSA (or a salt thereof).

37. (New) The process according to Claim 29, wherein the composition comprises a terpolymer of VPA (or a salt thereof), MAA (or a salt thereof) and VSA (or a salt thereof).

38. (New) The process according to Claim 29, wherein the composition comprises a terpolymer of VDPA (or a salt thereof), AA (or a salt thereof) and VSA (or a salt thereof).
39. (New) The process according to Claim 29, wherein the composition comprises a terpolymer of VDPA (or a salt thereof), MAA (or a salt thereof) and VSA (or a salt thereof).
40. (New) The process according to Claim 29, wherein in the composition any salt of the phosphonic acid, sulphonic acid or carboxylic acid is a wholly-neutralised or partially-neutralised salt.
41. (New) The process according to Claim 40, wherein the salt is a sodium salt, a potassium salt or an ammonium salt.
42. (New) The process according to Claim 29, wherein the amount is up to 1000 ppm, optionally from 1 ppm to 200 ppm.
43. (New) The process according to Claim 42, wherein the system water has a temperature at the wellhead in the range 80-200°C and a seabed temperature, below 40 degrees Celcius optionally as low as 5 degrees Celsius.
44. (New) The process according to claim 30, further comprising the addition to the water system of a scale deposition controlling amount of the composition.
45. (New) The process according to Claim 29, wherein the water system is operatively associated with an oilfield or oil-well.
46. (New) The process according to claim 30, wherein the composition has the formula:



where X is H or an alkali metal, alkaline earth or other polyvalent metal, ammonium or an organic base, and R is hydrogen, an alkyl moiety or a group, or polymeric chain comprising between 1 and 100,000 groups, said group or groups being derived from at least one unsaturated compound in which the multiple bond is activated chemically by an adjacent electron withdrawing group, and Y and Z are each hydrogen, a PO_3X_2 , SO_3X or CO_2X group or an alkyl or aryl moiety.

47. (New) The process according to claim 46, wherein X is H or an alkali metal or ammonia, Y is H, each Z is H, and R is H.

48. (New) The process according to claim 46, wherein X is H or an alkali metal or ammonia, Y is $\text{X}_2\text{O}_3\text{P}-$, each Z is H and R is H.

49. (New) The process according to claim 46, wherein X is H or an alkali metal or ammonia, Y is H or $\text{X}_2\text{O}_3\text{P}-$, each Z is H and R is $-\text{CH}_2\text{CHYPO}_3\text{X}_2$.

50. (New) The process according to claim 46, wherein the compound of formula (I) is a telomer and wherein R is a polymeric or copolymeric group formed from at least one monomer selected from unsaturated sulphonic acids, phosphonic acids, carboxylic acids and their water soluble salts.

51. (New) The process according to claim 46, wherein the monomer comprises vinyl sulphonic acid and/or its water soluble salt, vinyl phosphonic acid and/or its water soluble salts, vinylidene diphosphonic acid and/or its water soluble salts or acrylic acid.

52. (New) The process according to claim 46, wherein the monomer comprises at

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least one member selected from methacrylic acid, maleic acid, fumaric acid, itaconic acid, mesaconic acid, citraconic acid, crotonic acid, isocrotonic acid, angelic acid, tiglic acid, vinyl alcohol, vinyl chloride, vinyl acetate, styrene sulphonic acid, 2-acrylamido-2 methylpropane sulphonic acid and their water soluble salts.